





By: Hussam Alsaleh

Twitter: [_p22e_](#)

Email: p2e@hotmail.com

Definition



- Overusing smartphones with bad postures during use, and that brought us the problems and pain in the neck.
- smartphone overuse with awkward position during use, which brings multiple problems for the neck and area around.



Cervical Spine



- The 7 vertebrae of the cervical spine are divided into:
 - Upper cervical spine
 - C0-C1-C2 (Occiput-atlas-axis)
 - Allow for greater mobility
 - No intervertebral disc (IVD)
 - Lower cervical spine
 - C3-C7
 - Vertebral structures are similar
 - Disc at every level

Joints



- Occipito-Atlantal Joint (OA Joint)
- Atlantoaxial Joint (AA Joint)
- Facet Joint (Zygapophyseal Joints)
- Joint of the Lower Cervical Vertebrae (C3 - C7)
 - Uncovertebral Joint (Joint of Luschka)

Ligaments



□ Upper Cervical Ligaments:

- Occipito-atlantal Ligament Complex
 - Anterior
 - Posterior
 - Lateral
- Occipito-axial Ligament Complex
 - Occipito-axial ligament
 - Alar ligament
 - Apical ligament
- Transvers ligament

□ Lower Cervical Ligaments:

- Anterior Longitudinal Ligament (ALL)
- Intertransverse ligaments
- Posterior longitudinal ligament
- Interspinous ligament
- Supraspinous ligament
- Ligamentum flavum

Muscles



- Flexor Muscles
 1. Rectus capitus anterior
 2. Rectus capitis lateralis.
 3. Longus capitis.
 4. Longus colli.
 5. Eight pairs of hyoid muscles.

Muscles



- Extensor Muscles:
 1. Splenius capitis.
 2. Splenius cervicis.
 3. Assisted by:
 - Rectus capitis posterior major and minor.
 - Obliquus capitis superior and inferior.

Muscles

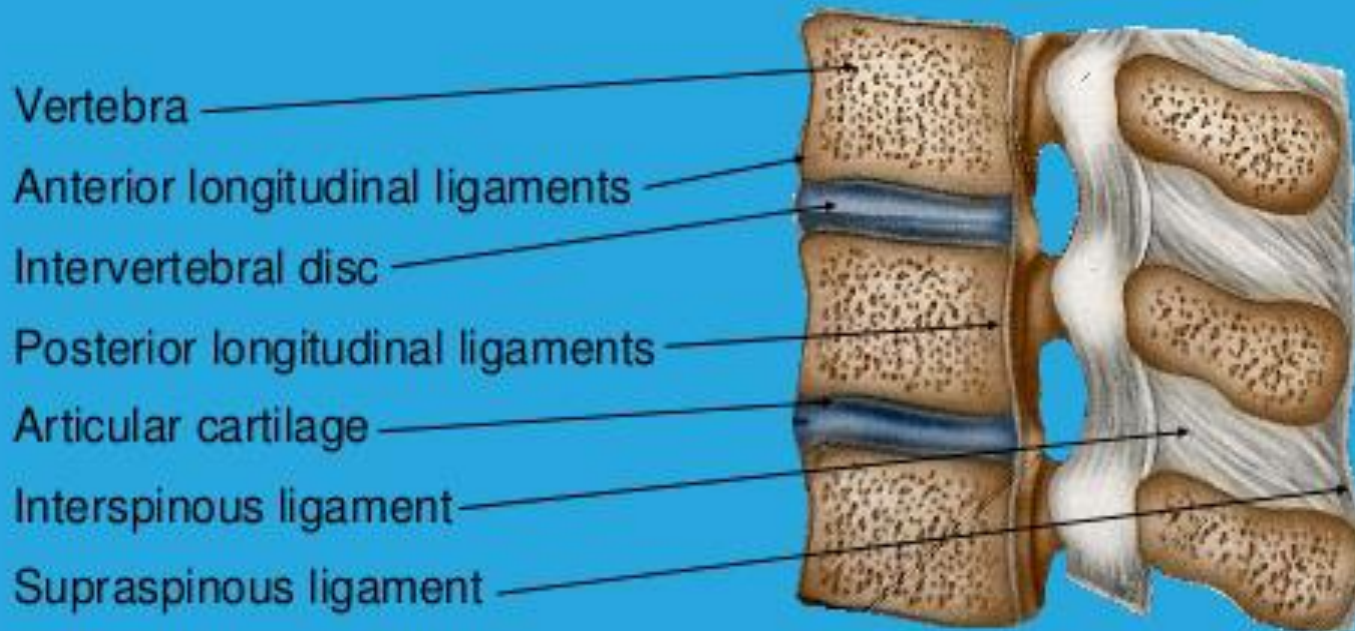


- Lateral Flexors:
 1. Sternocleidomastoid.
 2. Levator scapulae.
 3. Scalenus anterior, posterior, & medius.
 4. Plus the cervical flexors and extensors when developing tension unilaterally.

Anatomy



Neck Anatomy



Anatomy



Muscles of Root of the Neck

Scalenus Anterior Muscle

It is key muscle of root of neck. It is deeply placed & descends vertically from vertebral column to first rib.

Origin: Transverse processes of 3rd, 4th, 5th & 6th cervical vertebrae

Insertion: 1st rib

Action: Elevates 1st rib; laterally flexes & rotates cervical vertebrae.

Nerve Supply: C4, C5 & C6.

Important Relations

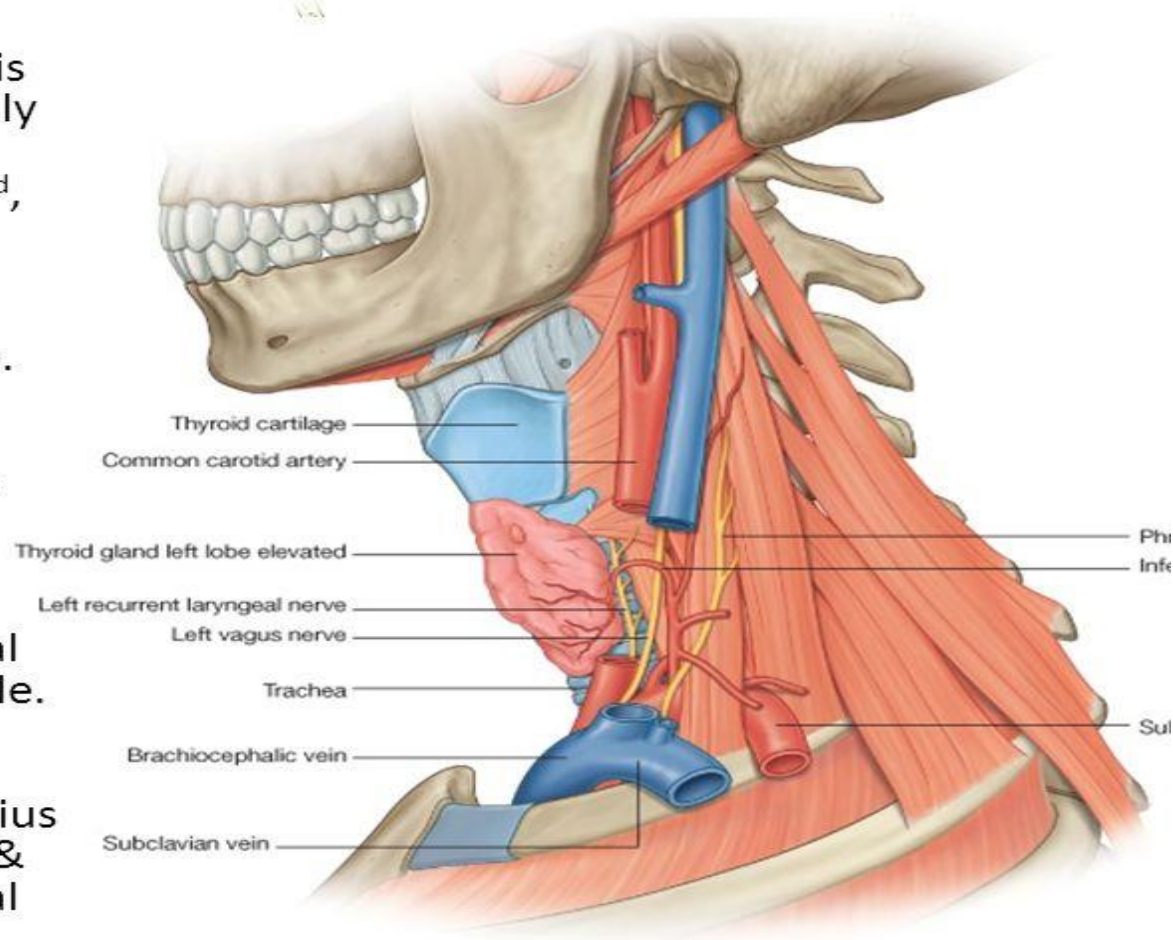
Anteriorly: carotid arteries, vagus nerve, internal jugular vein, deep cervical lymph nodes, Transverse cervical, suprascapular arteries.

Prevertebral layer of deep cervical fascia bind phrenic nerve to muscle.

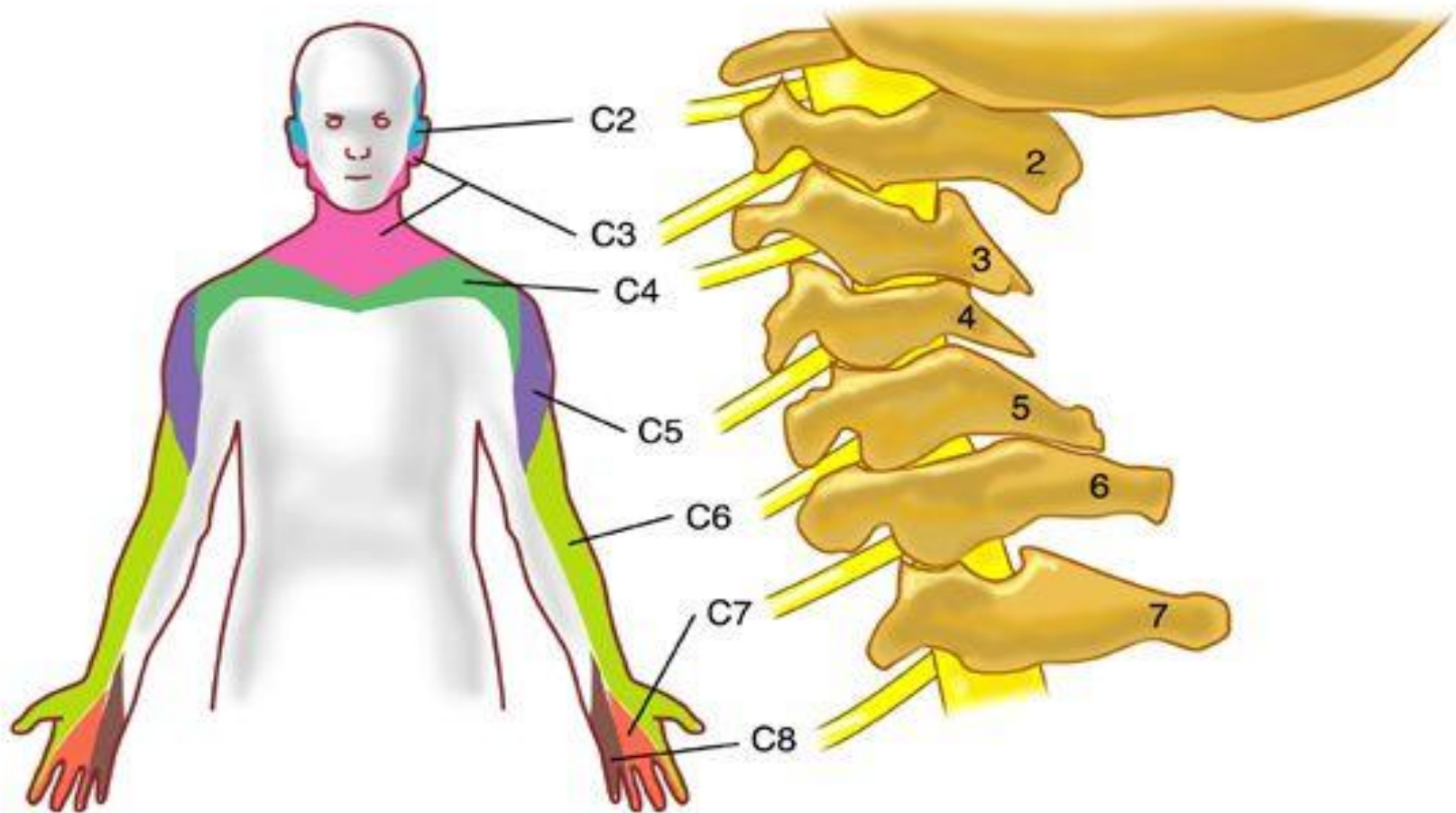
Posteriorly: pleura, origin of brachial plexus, second part of subclavian artery & Scalenus medius

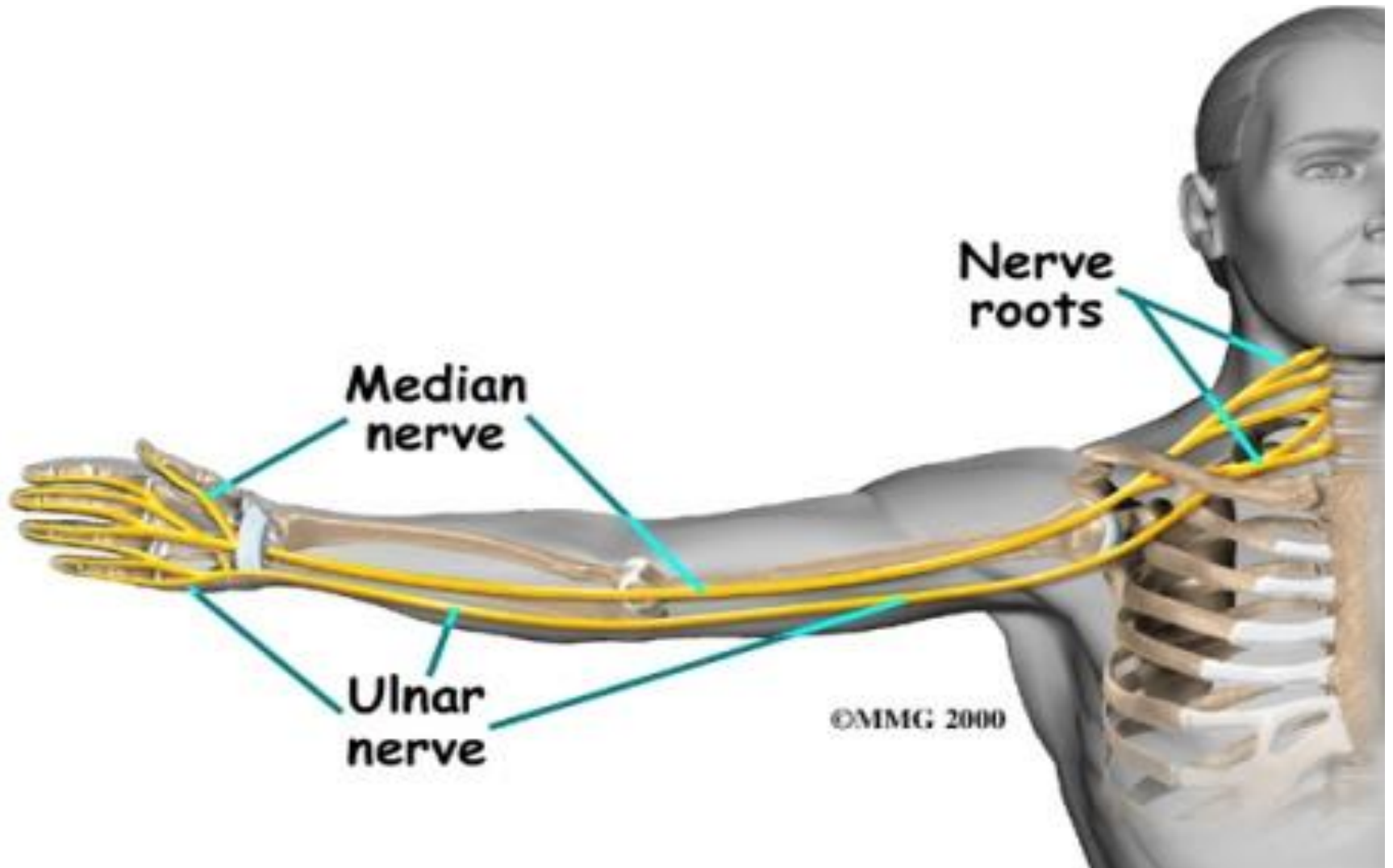
Medially: vertebral artery & vein & sympathetic trunk. left side medial border is related to thoracic duct.

Laterally: cervical plexus, roots of brachial plexus & third part of subclavian artery.



cervical myotomes

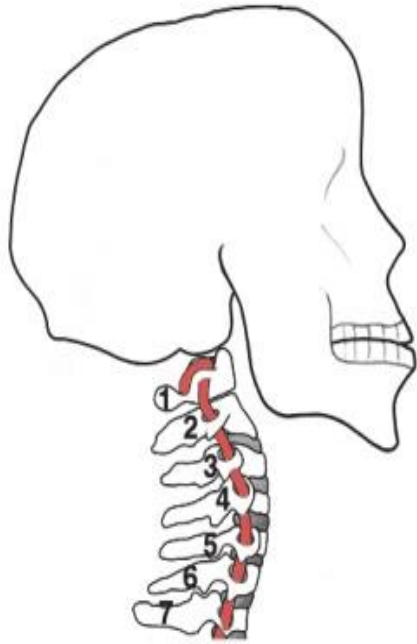




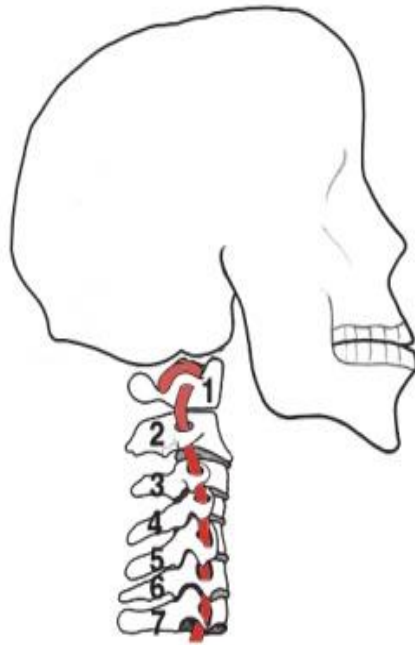
postures



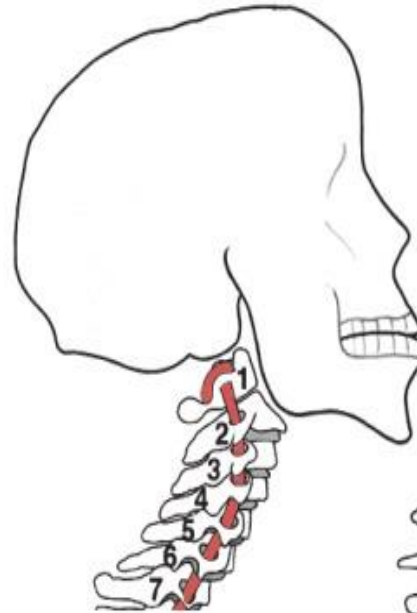
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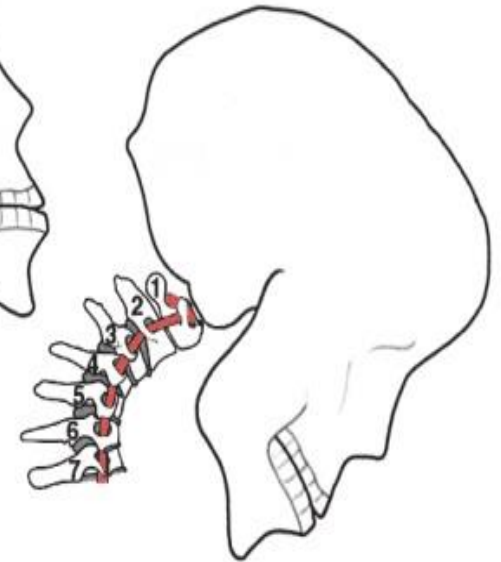
Normal Neck



Straight Neck



Swan Neck



Reversed Neck

postures



iphone syndrome



Tension Headache →

Neck and
shoulder pain →

Difficulty breathing,
pain in →
middle of back,
chest, and
lower back



Signs & Symptoms



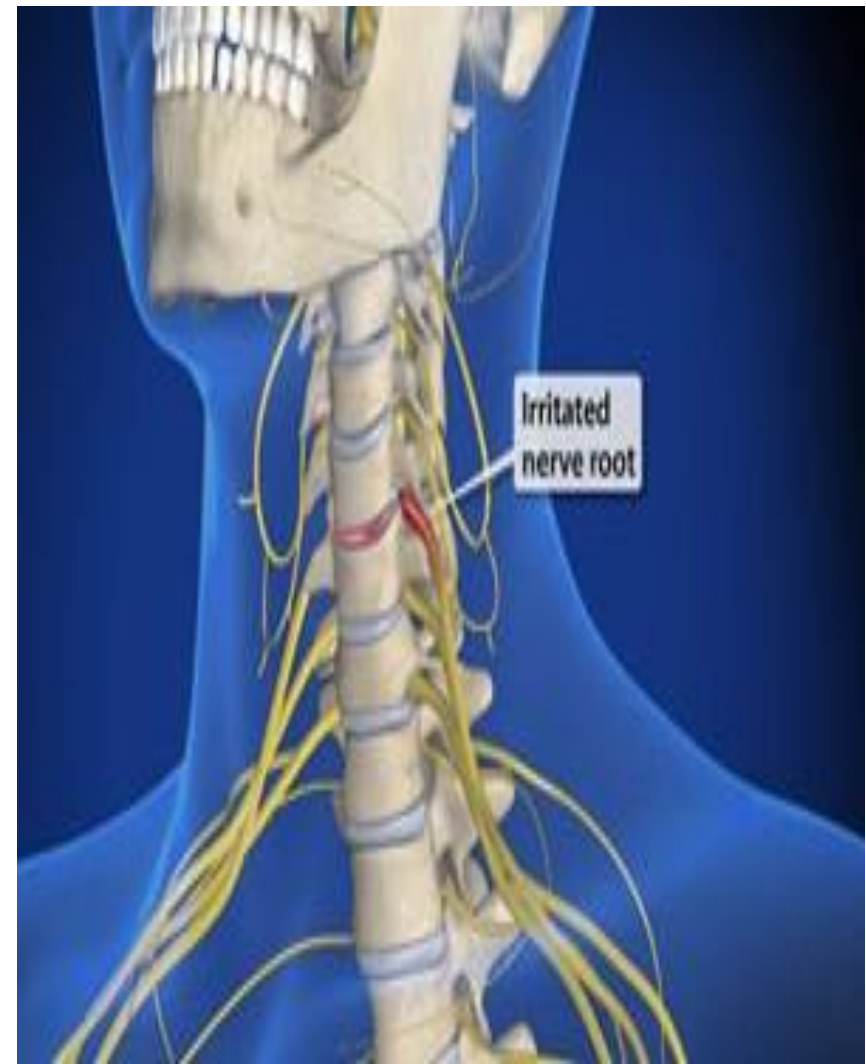
- Looking down at cell phones and other electronic devices causes the neck to be stuck in an unnatural posture with a bent neck for prolonged periods of time leading to problems with neck pain and discomfort.
1. Tightness or stiffness across the shoulders.
 2. Soreness in the neck.
 3. Chronic Headaches.
 4. Postural change.
 5. Numbness and Tingling felt in the upper extremities.
 6. Pain in the neck, Back, shoulder, Arm, Elbows, Hands.

Diagnose



1. Patient's medical history along with physical and neurological examination is done.
2. Radiographic studies such as x-ray.
3. MRI is done to detect bulging discs and herniations that are usually responsible for neurologic symptoms.
4. Nerve conduction studies and/or electromyography are done to find out if there has been any nerve damage.

Cervical Radiculopathy



Treatment



- Medications:

such as Medicines like non-steroidal anti-inflammatory drugs (NSAIDs), muscle relaxants, and narcotics may be prescribed for short-term use.

Trigger point injections are beneficial in some patients.



Treatment



- **Cervical Collars:**

These restrict movement and support the head taking the burden off the neck. Lying down also helps in limiting the neck movement and reducing pressure (weight) thus giving the muscles rest while healing.



Treatment



- Cervical Traction:
- Cervical traction gently pulls the head and stretches the neck muscles thus increasing the size of the neural passageways (foramen).



Physical Therapy



- Helpful in relieving neck pain and is incorporated into the treatment plan.



Physical Therapy



- Neck exercises:



(The arrow represents the direction the head is moving and the hands are resisting, but not stopping, the movement; Use light pressure through the full ROM)

Thank you

